Electoral Authoritarianism and Human Development

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Abstract

Do autocratic institutions matter for the welfare of average citizens? Despite the large literature comparing democracies and autocracies, we know little about how human development outcomes differ among autocratic types. Contrary to conventional wisdom, this article argues that contested autocratic elections promote human development by improving state accountability and capacity. Using an instrumental variables setup, I show that the presence and history of multiparty autocratic elections predict significantly better outcomes on health, education, gender equality, and basic freedoms relative to non-electoral autocracy. In fact, the effects on health and education are as strong as the effects of democracy. In contrast, legislatures and parties without multiparty elections produce slightly negative outcomes because these institutions chiefly concern elite cooptation. The results have major implications for the study of autocracy, the political economy of development, and the welfare effects of international election promotion.

Keywords

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Introduction

Which political institutions promote responsive policy-making and positive outcomes in areas like health and education? An extensive literature has focused on democracy as synonymous with political accountability and, in turn, social welfare provision. Indeed, there is overwhelming evidence that democracies produce higher levels of social spending (e.g., Haggard & Kaufman, 2008; Kaufman & Segura-Ubiergo, 2001; Stasavage, 2005) and human capital (e.g., Gerring, Thacker, & Alfaro, 2012; Lake & Baum, 2001; Sloan & Tedin, 1987).

However, this binary distinction between democracy and dictatorship obscures a great deal of variation, as many autocracies have pursued expansive social welfare programs. Perhaps the best-known example is Bismarck's proto-welfare state in 19th-century Prussia, but this is far from a unique case. The Asian Tigers and Eastern European Communist regimes strongly invested in education and basic health (Haggard & Kaufman, 2008). Brazil's military regime extended health insurance and social security to the rural population in 1971, a reform that failed to pass under previous democratic governments (Falleti, 2009). In fact, about two thirds of countries' first adoptions of old age, disability, and health insurance have occurred under authoritarianism (Mares & Carnes, 2009).

Can political institutions account for this within-autocracy variation? For instance, Malaysia and Swaziland are both middle-income autocracies, but twice as many adults are illiterate in Swaziland and 14 times as many children die before the age of 5. Is this connected to Swaziland's lack of party competition, whereas Malaysia has a 50-year history of contested elections? Despite a growing literature on autocratic parties, legislatures, and elections (e.g., Brownlee, 2007; Gandhi, 2008b; Geddes, 1999; Svolik, 2012), there has been surprisingly little work comparing human development outcomes across these institutions. What makes this oversight especially significant is that international actors frequently pressure autocrats to adopt democratic elements (Goldsmith, 2008; Levitsky & Way, 2010). As a result, about two thirds of autocracies over the last 20 years have allowed multiparty elections. Yet a critical question remains largely unexplored: Is this a good thing for these countries' citizens?

Using an instrumental variables (IVs) setup, this article shows that *electoral authoritarianism* (EA) has a positive causal effect (relative to non-electoral autocracy) on a wide range of human development outcomes, including infant mortality, literacy, and gender balance in schooling. EA regimes are defined as autocracies with legal multiparty competition in legislative elections. Although contested, these elections are distinguished from the

democratic type by unfree and unfair conditions that favor the regime. This imbalance has led many scholars to see autocratic elections as insignificant or even damaging to governance (Chauvet & Collier, 2009; Goldsmith, 2008; Lust-Okar, 2006). Yet even when they are seriously manipulated, I argue that autocratic elections can be sufficiently competitive to contribute to popular pressure and governmental capacity.

Surprisingly, EA's effects on health and education roughly match the effects of democracy. As a result, this article relocates the social welfare divide among regimes—the critical factor is not democracy, but contested elections. However, democracy is maintained as the most advantageous system given its clear superiority on civil liberties and state repression.

In further results, I find that legislatures and ruling parties in the absence of multiparty competition predict slightly *negative* human development outcomes. The recent literature on autocratic institutions has shown that legislatures and parties promote regime durability (Brownlee, 2007; Magaloni, 2006, 2008; Svolik, 2012) and certain policy concessions (Gandhi, 2008b), but the focus has instead been on elite cooptation. This article complements this work by showing that social welfare policies are only promoted when citizens and an opposition are granted voice, muffled as it may be.

For outcomes, I focus on four areas of human development: health, education, gender equality, and basic freedoms. These outcomes are emblematic of capable and responsive governance, and reflect a special concern with human capital and long-run prosperity. As this article is the first to relate autocratic institutions to several of these outcomes, the findings have important implications for the political economy of development and the welfare effects of international election promotion. This article also adopts two innovative empirical strategies to address the potential endogeneity of EA: It distinguishes the short- and long-term effects of institutions and uses the regional diffusion of regime types and the inheritance of institutions from previous rulers as IVs.

The following section overviews recent work on the policy and development effects of democracy and autocratic institutions. The "Electoral Authoritarianism and Human Development" section argues that EA regimes should have superior human development outcomes compared with closed (non-electoral) autocracies, based on three of the mechanisms commonly associated with democracy. The "Determining the Causal Effect of Autocratic Elections" section lays out the endogeneity challenge in testing autocratic institutions and defends my IV approach. The remaining sections overview the data and empirical setup, followed by the empirical findings and a discussion of their implications.

## Past Work on Democracy and Autocratic Institutions

Democracy and Human Development

An enormous literature has developed on the association between democracy and human development, as well as economic growth, inequality, and countless other outcomes.[1] The central logic is that democracy provides incentives for politicians to improve citizen welfare. Democracies are also more effective at implementing policies, as they have higher quality of government and lower corruption (Adserà, Boix, & Payne, 2003; Humphreys & Bates, 2005).

There is strong evidence that democracy leads to greater public investment in health and education (Brown & Hunter, 2004; Haggard & Kaufman, 2008; Lake & Baum, 2001; Stasavage, 2005; but see Mulligan, Gil, & Sala-i-Martin, 2004). Suffrage extensions, particularly for women and the poor, have also been shown to increase social spending (Husted & Kenny, 1997; Lindert, 2004). In turn, this spending translates into a positive association between democracy and infant mortality (Besley & Kudamatsu, 2006; Gerring et al., 2012; Lake & Baum, 2001; Zweifel & Navia, 2000), other measures of public health (Gerring, 2011; Lake & Baum, 2001; Sloan & Tedin, 1987; Wigley & Akkoyunlu-Wigley, 2011), educational attainment (Brown, 1999; Halperin, Siegle, & Weinstein, 2010; Sloan & Tedin, 1987), and gender equity in human development (M. Baum & Lake, 2003; Beer, 2009; Brown, 2004). However, the link between democracy and outcomes is more often disputed (Carbone, 2009; Nelson, 2007; Ross, 2006). For instance, Ross (2006) argues that democracy increases health spending targeted at the middle class, but is unrelated to infant mortality.

Autocratic Institutions

The spread of autocratic institutions. Despite the extensive literature on democracy, there exists little work distinguishing human development outcomes among autocratic types. This is a major oversight given the global spread of autocratic institutions traditionally associated with democracy, such as legislatures, parties, independent courts, and elections (Gandhi, 2008b; Schedler, 2006). Figure 1 shows the prevalence of closed autocracy, EA, and democracy in each year from 1946 to 2007 (from Boix, Miller, & Rosato, 2013; Cheibub, Gandhi, & Vreeland, 2010). Again, EA regimes are defined as autocracies with legal multiparty competition for the legislature (e.g., Russia, Malaysia, and Singapore). Closed autocracies either lack electoral institutions (Saudi Arabia, UAE) or feature single- or no-party elections (North
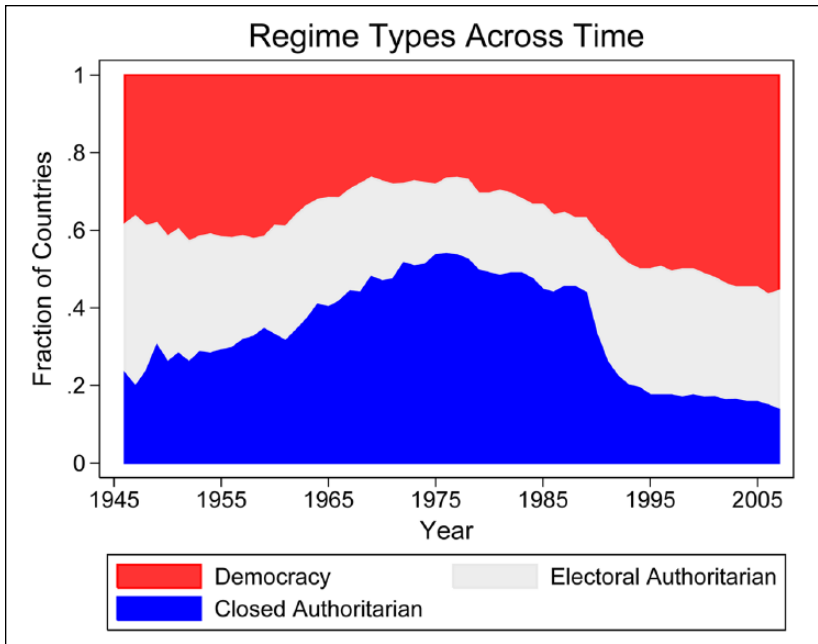
Figure 1. Distribution of three regime types by year.
The figure shows the distribution of three regime types by year from 1946 to 2007. Electoral authoritarian (EA) regimes allow legal multiparty competition for the legislature (measured from Cheibub, Gandhi, & Vreeland, 2010). Democracy is measured from Boix, Miller, and Rosato (2013). Note the large fraction of EA regimes as far back as 1946 and their sharp rise around the end of the Cold War.

Korea, Swaziland), which are largely ceremonial in nature. EA regimes distinguish themselves from democracies by manipulating electoral competition to below democratic standards. As seen, EA is not entirely new, but has recently become the large majority among autocracies.

This diffusion has stimulated a growing literature on the causes and consequences of autocratic institutions (Geddes, 1999; Levitsky & Way, 2010; Schedler, 2006; Svolik, 2012). A dominant theme in this work is the strategic value of institutions for regime survival, either through co-opting elites (Blaydes, 2011; Geddes, 1999; Magaloni, 2006, 2008; Svolik, 2012) or extending control over citizens (Lust-Okar, 2006; Magaloni, 2006). Autocratic elections, for instance, allow regimes to signal dominance (Magaloni, 2006; Simpser, 2013), disperse patronage (Lust-Okar, 2006; Magaloni, 2006), and gather information on opponents (Gandhi & Lust-Okar, 2009; Magaloni, 2006; Miller, 2015).

If autocratic elections were only adopted based on such calculations, it would be difficult to test their effects as they would be entirely endogenous to regime strategies. However, there are several other motivations for regimes to hold elections. The most widely recognized is international pressure, which rewards countries for adopting electoral institutions through aid, trade, and military benefits (Carothers, 1999; Levitsky & Way, 2010). Although usually packaged as democracy promotion, the end result is often transition to EA, as autocrats determine that they can profitably adopt the formal institutions of democracy without the substance (Carothers, 1999; Goldsmith, 2008). Clear cases include Leopold Senghor's late-1970s adoption of EA in Senegal "to attract Western aid and investors" (Coulon, 1988, p. 157) and Burma's recent liberalization. Other factors encouraging EA adoption include domestic protest, the country's institutional history, post-civil war settlements (often under international mediation), and regional diffusion, which I expand upon below.

Autocratic institutions and policy. Compared to regime survival, less work has been done on how autocratic institutions influence policy. The most thorough study in this vein is Gandhi (2008b), which argues that autocratic legislatures serve as forums for policy compromises with elites. To test this, Gandhi shows that legislatures predict greater civil liberties and lower military spending.[2] Elsewhere, she relates legislatures to workers' wages and strike behavior (Kim & Gandhi, 2010). A separate current of work focuses on the power of legislatures and parties to constrain the arbitrary rule of dictators. This allows rulers to make credible promises, leading to more investment and economic growth (Gandhi, 2008a; Gehlbach & Keefer, 2011; Jensen, Malesky, & Weymouth, 2014; Wright, 2008).[3]

It is less clear that legislatures and parties by themselves will influence *social welfare* policies. Within closed autocracies, these institutions primarily involve deal-making among elites. If they succeed at this cooptation, legislatures and parties magnify regime power and may reduce the need to appeal to average citizens (Jensen et al., 2014; Wright & Escribà-Folch, 2012). Other authors suggest that autocratic institutions act as political concessions that substitute for public goods, implying that liberalized autocracies should have worse human development outcomes (Desai, Olofsgård, & Yousef, 2008). Perhaps for these reasons, Gandhi (2008b) does not find a relationship between legislatures and social spending. Furthermore, the literature on legislatures and parties has focused on the *capacity* of dictators to compromise on policy rather than their incentives, which limits the causal significance of these institutions. Critically, Gandhi's (2008b) theory is that legislatures *enable* policy concessions by providing a forum for bargaining and

information-sharing. The *motivation* to compromise in her theory stems from other factors, particularly the threat of armed revolt (see Pepinsky, 2014).

In contrast, I argue below that contested autocratic elections both motivate regimes to improve social welfare and improve their capacity to do so. As a result, contested elections are the critical institutions within autocracies for generating human development. Past work has linked autocratic elections to patronage (Blaydes, 2011; Lust-Okar, 2006) and budget cycles (Blaydes, 2011; Magaloni, 2006), which are among the array of tricks that ruling parties use to control elections. However, many scholars remain skeptical that these elections matter for substantive policy outcomes. Lust-Okar (2006), for instance, contends that patronage "trumps by far any role of elections as arenas for contests over the executive or critical policies" (p. 459). Yet evidence is growing that multiparty autocracies are associated with distinct policy choices. Conrad (2011) predicts calorie consumption and civil liberties based on the legalization of opposition parties. Hankla and Kuthy (2013) show that multiparty legislatures predict free trade, which they argue serves as a public good. Finally, several studies find that Chinese local elections encourage public goods provision and greater responsiveness (Martinez-Bravo, Padró i Miquel, Qian, & Yao, 2012; O'Brien & Li, 2000; Wang & Yao, 2007).

This study extends this analysis to human development outcomes, the clearest indicators of citizen welfare and policy responsiveness. Despite the extensive work on democracy, studies of autocratic institutions have surprisingly neglected core measures of human development. The closest is work on public spending (Desai et al., 2008; Gandhi, 2008b) and calorie deprivation (Blaydes & Kayser, 2011; Conrad, 2011). I demonstrate a strong causal effect of EA on infant mortality, literacy, gender balance in schooling, and other outcomes.

This article presents several further empirical advances. First, I differentiate multiparty elections from other distinct, but correlated, institutions. Gandhi (2008b) focuses on autocracies with legislatures, but only 66% of these regimes qualify as EA. Following Geddes (1999), other studies compare military, party-based, and personalist regimes (Lai & Slater, 2006; Weeks, 2008; Wright, 2008). For a fuller picture of which institutions matter, I compare multiparty elections to legislatures, parties, and the Geddes (1999) categories.[4]

Second, I test both a country's current regime type and its regime type history. As Gerring (2011) argues, political institutions should influence human development only over an extended time period. Variables like literacy and life expectancy change slowly and political regimes' effects permeate gradually by transforming policy, bureaucratic effectiveness, and civil society. Thus, Besley and Kudamatsu (2006), Gerring (2011), and Gerring et al.

(2012) generally find that health outcomes are positively related to the historical stock of democracy, but not to its current level. I extend this analysis to the history of EA and other autocratic institutions.

Third, to identify causal effects, I use the prevalence of regime types in a country's region and EA inheritance from previous rulers as a novel set of instruments for EA. As discussed below, previous work has either ignored the endogeneity problem or used instruments that likely fail the required exclusion restrictions.

EA and Human Development

This section explains why EA regimes display superior human development outcomes relative to closed autocracies. Human development is promoted by effective public goods provision—especially in health services, education, and environmental protection—and policies that promote broad social welfare. Because such policies are widely popular, political features that incentivize governments to appeal to citizens will produce better development outcomes (Brown & Hunter, 2004; Lake & Baum, 2001). This case is easy to make for democracy, which promotes responsive leaders by directly tying their power to popular support.

I argue that EA regimes are also more motivated than closed autocracies to respond to mass preferences. This follows from two mechanisms commonly associated with democracy, but which I argue also apply to EA regimes. The most critical is *electoral pressure*. Although initially adopted in response to international incentives or to co-opt domestic actors, autocratic elections can quickly transform into powerful sources of popular pressure. Despite being manipulated, many of these elections are highly competitive and thus force regimes to respond to mass demands. A secondary mechanism is *political openness*, which provides another channel for popular pressure in liberalized autocracies. Finally, I argue that institutionalized autocracies also have advantages in *governmental capacity* and are thus more effective at implementing policies that provide for basic needs and build human capital.

Electoral Pressure

By definition, autocratic elections are contested on an uneven playing field (Magaloni, 2006; Schedler, 2006), but this does not eliminate uncertainty or electoral turnover. In fact, autocratic elections can be highly competitive, providing an opening for citizens to sanction regimes for poor policy outputs. As Levitsky and Way (2010) argue, "Government officials fear a possible opposition victory (and must work hard to thwart it) . . . In competitive authoritarian regimes, incumbents are forced to sweat" (p. 12).

Contrary to what many assume, autocratic elections feature dramatic and often unexpected swings in support. In each legislative election under EA, a one-standard-deviation shift in the ruling party's seat share is about 19%, slightly *higher* than within democracies.[5] Examples of unanticipated electoral shocks under EA include Mexico in 1988, Singapore in 1991, Morocco in 2007, and Russia in 2011. As a result, electoral turnover is a real threat. Using Hyde and Marinov's (2012) data, I find 51 elections since 1946 in which an EA regime's incumbent party lost, with another 55 in which the incumbent leader left office due to the election. Together, these constitute nearly 1 in 5 national elections under EA. Either event roughly doubles the likelihood of democratization within 2 years (using Boix et al., 2013), as occurred in Benin in 1991, Guyana in 1992, and Mexico in 2000. Furthermore, a majority of the turnover cases experienced "regime failure" as defined by Geddes, Wright, and Frantz (2014). To avoid this fate, regimes spend copiously on election campaigns, clientelism, bonuses for public workers, and public goods to placate citizens, none of which would occur if elections were truly pre-ordained.

Even when ruling parties do not immediately risk losing power, several features of contested autocratic elections encourage policy responsiveness. First, even when they control elections in the present, autocrats are constantly reminded that complacency risks defeat in the future. It is tempting to make the faulty inference that because many autocratic elections are won by large margins, they cannot motivate regimes to provide public services. However, this is akin to arguing that because a champion boxer consistently wins his fights, he must not feel the need to train very hard. This foresight retains parties' sensitivities to popular demands, while lengthening their time horizons, leaving them more inclined to invest in education and long-term development (Gehlbach & Keefer, 2011; Olson, 2000; Wright, 2008). Ruling parties can also benefit from successful development even after democratization, as most remain electorally competitive post-transition (Wright & Escribà-Folch, 2012). For instance, the ruling legacies of Mexico's PRI and Taiwan's Kuomintang (KMT) were central to their regaining power under democracy.

Second, even when national parties are highly secure, individual politicians may not be. For instance, between 1984 and 2005, reelection rates for Egyptian legislators varied from 19% to 42% (Blaydes, 2011). Local leaders also use strong electoral results to signal their competence and rise up the party hierarchy (Blaydes, 2011; Brandt & Turner, 2007). This electoral pressure motivates politicians to improve citizen welfare, at least in their local constituencies. Third, besides the fear of outright losing, ruling parties seek to maximize their winning margins to project strength and deter elite defections (Magaloni, 2006; Simpser, 2013). Fourth, even semi-competitive elections can function as dangerous focal points for opposition collective action, especially if there is a

widespread perception of fraud (Fearon, 2011; Magaloni, 2006; Svolik, 2012). About one in three EA elections feature significant protests, riots, or violence surrounding the election (Hyde & Marinov, 2012). This vulnerability encourages regimes to at least temporarily reduce citizen discontent.

A final question is why many autocrats choose social welfare policies and public goods to defuse this popular pressure, rather than exclusively relying on fraud, repression, or vote buying. Although many EA regimes rely on some mix of these strategies, public goods often prove to be the safest option. Fraud and repression risk triggering protest, a loss of legitimacy, and international punishment, thereby forgoing the central benefits for which elections are adopted. Vote buying and patronage can control elections, but can also be exceedingly costly, especially for large, wealthy populations (Gandhi & Lust-Okar, 2009; Hicken, 2011).[6] When clientelism does occur, it often consists of an informal bargain in which local public goods are traded for electoral support.[7] As a result, when constructing electoral coalitions, EA regimes are naturally drawn to the poor as they are more easily co-opted by state assistance (Blaydes, 2011; Gandhi & Lust-Okar, 2009; Hicken, 2011).[8] In turn, this leads many EA regimes to strategically emphasize social assistance and basic development outcomes.

Numerous cases show that even minimally competitive elections can motivate EA regimes to improve social welfare policies.[9] Nelson (2007) points to a positive effect of competitive elections on education reform in autocratic Malawi, Uganda, Tanzania, Kenya, and Mexico. In several detailed case studies, Haggard and Kaufman (2008) identify autocratic elections as key to increased public goods provision and social assistance in Taiwan, Brazil, Mexico, Peru, and Venezuela. We can also find evidence of within-regime policy shifts: In a study of 86 EA regimes, electoral declines for ruling parties predict post-election increases in education and social spending and decreases in military spending (Miller, 2015).

A clear example of autocratic electoral pressure promoting human development is Taiwan's path to universal health care in 1995. As late as 1980, only 16% of Taiwanese were insured and they spent a miniscule US$78 per capita on health care (Chiang, 1997). After the ruling KMT allowed opposition competition in 1986, the Democratic Progressive Party (DPP) strongly emphasized social welfare reform and garnered unexpected electoral support in 1986 and 1989. The KMT quickly pivoted to an expansion of social programs due to this newfound political pressure (Chiang, 1997; Haggard & Kaufman, 2008; Son, 2001). In particular, the KMT moved to nullify one of the DPP's chief policy demands by passing health insurance for farmers in 1988 and proposing a National Health Insurance (NHI) system by 2000.[10] Although the KMT remained electorally dominant, the DPP was steadily

gaining support, creeping up to 31% of votes in 1992. Anticipating the rematch in 1995 and facing mounting pressure to deliver on social demands, the KMT fast-tracked the NHI, implementing it 9 months before the election (Son, 2001). By February 1996, 92% of the population was insured, with a big expansion in health care utilization (Chiang, 1997).

Civil Liberties and Political Openness

An alternative perspective is that direct popular engagement with politicians is more effective at engendering responsiveness than electoral pressure (Cleary, 2007; Verba, Schlozman, & Brady, 1995). Protests, strikes, personal appeals, and civil society movements all motivate governments by providing information on policy demands and threatening to develop into electoral or violent challenges if left unaddressed. In turn, the ability of citizens to effectively pressure the government depends on a number of political factors, often termed the "political opportunity structure" (Kitschelt, 1986). I focus on two such factors: individual civil liberties and the openness of the political space to rival groups. Although democracies provide the freest environments by far, EA regimes are at least freer than closed autocracies and thus motivate their leaders to provide more extensive public goods.

First, protected rights to speech and association are critical to popular pressure.[11] Here, the evidence is clear that EA regimes lie about midway between closed autocracies and democracies, using either the Freedom House (2010) rating of civil liberties or the Cingranelli–Richards (CIRI) data set's rating of freedom of speech (Cingranelli & Richards, 2010; see Online Appendix Figure A1.) The freedom advantage of EA over closed autocracy is confirmed in the empirical section, which further shows that legislatures and parties by themselves are *negatively* related to civil liberties.

Second, political openness gives room to rival organizations that can pressure the ruling party or help to provide social services themselves (Lake & Baum, 2001; Gerring et al., 2012). By definition, EA regimes allow opposition parties, and they tend to also tolerate outside groups like unions, nongovernmental organizations (NGOs), and civil society movements, albeit begrudgingly. Political openness can particularly influence development outcomes, as popular challenges often focus on the inadequate delivery of public services. In 1970s Brazil, for instance, an ideational movement within the state bureaucracy known as the *sanitaristas* coalesced around the goal of decentralizing and modernizing public health care (Falleti, 2009). In Russia, civil society groups such as Health Care for Children have organized around public health grievances, prompting a US$900 million government initiative to improve health care delivery (Englund, 2011).

Governmental Capacity

It is not enough for leaders to want to improve citizens' lives—they must have the capacity to do so. A government's ability to translate policy goals into outcomes encompasses a range of political qualities, including bureaucratic capacity, the rule of law, corruption, and territorial control by the state. Whereas democratic systems necessitate a variety of institutions that can effectively implement policies (Adserà et al., 2003; Humphreys & Bates, 2005), closed autocracies often exercise power through personal ties, military hierarchies, or ruling families. In particular, closed regimes often invest little in professionalized bureaucracies, which are costly and potentially threatening. As a result, their ability to deliver public services may be limited, even when so motivated.

In contrast, EA regimes establish a similar set of formal institutions as democracies. Even when manipulated, they contribute to bureaucratic development, specialization, and information-sharing, promoting governmental effectiveness in the long run (Charron & Lapuente, 2011). Looking at Malaysia, Indonesia, and the Philippines, Slater (2008) concludes that autocratic elections can spur institutional capacity by forcing regimes to develop competent parties and extend state control to marginal populations. EA may also help to select more skilled and technocratically competent leaders, who must rise through a party hierarchy (or found it) and win contested elections (Svolik, 2012). Other autocrats rule by virtue of birth or military leadership, which has little connection to governing ability.

Finally, EA regimes have an advantage in that autocracies are typically less constrained in implementing their policy goals. Democratic leaders face strong incentives for social reform but can be stymied by powerful interest groups (such as unions and bureaucracies) and legislative gridlock (Brown & Hunter, 2004; Nelson, 2007; Olson, 1984). In contrast, ruling parties in EA regimes usually dominate the legislature and face limited opposition from within the public sector (Levitsky & Way, 2010; Magaloni, 2006). Thus, EA regimes advantageously combine electoral incentives with political centralization.

Determining the Causal Effect of Autocratic Elections

The Endogeneity Problem

The central problem with testing the effect of EA is the endogeneity of regime type. Elections are adopted by autocrats who simultaneously determine

governing strategies and policies. A variety of factors could mutually influence these decisions. For instance, strong opposition movements may lead autocrats to accede to elections and policy concessions. Simple correlations cannot therefore determine the causal effects of autocratic institutions. Unfortunately, most work in this area has ignored the endogeneity problem, with Gandhi (2008b) a notable exception. Although the problem also applies to democracy, it is less severe given that democracy is typically not chosen by the same rulers who determine policies. Endogeneity concerns are partly addressed here by testing regime history, which is driven by institutions up to 60 years in the past, lessening the confounding from near-term political factors.

IVs provide a fuller approach to the endogeneity issue. IVs are used to demonstrate that an endogenous variable X causes variation in an outcome Y. To recover a causal effect, we use a set of instruments $\mathbf{Z}$ that must satisfy two conditions: (a) They must be sufficiently predictive of X and (b) each instrument must satisfy an exclusion restriction whereby it only influences Y through its effect on X (net of any controls). The second condition, often ignored in empirical work, is critical: Only if we can substantively support the claim that $\mathbf{Z}$ does not directly influence Y can we infer the causal effect of X.

In at least three studies, Gandhi (2008a, 2008b; Kim & Gandhi, 2010) uses IVs to account for the endogeneity of autocratic legislatures. However, as noted in Pepinsky (2014), the choice of instruments is problematic, as none clearly satisfy an exclusion restriction.[12] I now turn to an original IV strategy that more plausibly meets the exclusion restrictions.

The IV Strategy: Diffusion and Inheritance of Autocratic Elections

This study uses two sets of instruments for EA. Both are derived from theoretical reasons that regimes hold contested elections, independent of their general cooptation strategies: international diffusion and institutional inheritance. First, countries are known to be more likely to adopt and sustain democracy if higher fractions of their region and neighborhood are democratic (Gleditsch & Ward, 2006; Starr, 1991). I find the same diffusion effect for EA, implying that the regional and neighborhood prevalence of EA and democracy can serve as exogenous instruments for EA (Miller, 2014). This parallels a similar strategy in Acemoglu, Naidu, Restrepo, and Robinson (2014), which uses regional diffusion to instrument for democracy.

Why are autocracies more likely to adopt elections when nearby countries include them? Most simply, surrounding regime types proxy for region-specific

international pressures (Levitsky & Way, 2010). Furthermore, there are at least four reasons that EA and democratic neighbors *directly* influence EA adoption: learning and emulation by autocratic leaders (Simmons, Dobbin, & Garrett, 2006), an absence of support for similar neighboring regimes from powerful closed autocracies (Ambrosio, 2010; Levitsky & Way, 2010), increased popular pressure for elections when citizens witness them in neighboring countries (Bratton & van de Walle, 1997; Gleditsch & Ward, 2006), and a desire by autocrats to avoid looking like illiberal outliers (Whitehead, 1996). For instance, Julius Nyerere instituted multipartyism in Tanzania based on a belief that the wave of liberalizations in early-90s sub-Saharan Africa "would inevitably catalyze pressures for similar changes in Tanzania" (Hoffman & Robinson, 2009, p. 125). Based on this theoretical setup, I include four instruments: the fraction of democracies and EA regimes in each country's region (excluding the country itself) and among its neighbors.[13]

Second, I leverage the inheritance of EA from previous rulers. Multiparty competition is very sticky, even after a change of leadership. When an autocratic executive loses power, the new ruler retains multiparty elections 93% of the time. As Pepinsky (2014) notes, the number of parties inherited from the previous regime is the most convincing instrument used in Gandhi (2008b). Jensen et al. (2014) use an identical instrument. Similarly, I use two dummies for EA under the previous leader and the previous autocratic regime.[14] When testing regime type history, I instead use weighted histories of the six variables as instruments.

As detailed below, diagnostic tests clearly indicate that these variables satisfy the two requirements for instruments. The first stages of the IV models show that they are highly predictive of EA and its history, well exceeding standard benchmarks for strong instruments.[15] In addition, I use the limited-information maximum likelihood (LIML) IV estimator, which is more robust to weak instruments than two-stage least squares (2SLS; Stock & Yogo, 2005).

The exclusion restrictions are also likely to be satisfied. First, it is improbable that external regime types directly influence development outcomes. A possible alternative causal channel is through policy diffusion, whereby external countries' regime types predict their policies and they diffuse to the country's own policies. To account for this possibility, all models control for the regional average of the dependent variable. This effectively blocks the causal pathway through policy diffusion (see Pearl, 2009 and Online Appendix Figure A2), as well as many other potential confounders. I also control for aid to account for direct intervention. Thus, for the exclusion restrictions to fail, there must be an omitted factor that predicts a country's development outcomes and its neighbors' regime types,

but *not* it's neighbors' development outcomes, which is unlikely.[16] The case for EA inheritance is even simpler. As discussed in Jensen et al. (2014), instrumenting with inherited institutions eliminates the confounding due to leaders who establish contested elections and may also pursue distinctive policy strategies.[17]

Second, given the multiple instruments, overidentification tests can further support the exclusion restrictions. These tests calculate whether the residuals from the outcome equation are correlated with the instruments. If so, this is evidence that the instruments violate the exclusion restrictions. For all models, the overidentification tests support the validity of the six instruments.[18]

Although caution is warranted for any IV strategy, this represents the most thoroughly supported IV approach to testing autocratic institutions, both theoretically and diagnostically. The choice of instruments is also guided by the judgments of Pepinsky (2014), Jensen et al. (2014), and Acemoglu et al. (2014). Furthermore, the findings are highly robust to different choices of instruments. The online appendix shows the results for infant mortality and literacy after alternatively dropping the EA inheritance, regional, and neighbor instruments, as well as dropping each of the six instruments individually. For regime history, 18 of 20 tests are significant (at the .10 level).[19] Finally, the results hold across different samples and IV techniques, and consistently match the results testing regime history without IVs.

Empirical Approach and Data

Dependent Variables

For outcome variables, I focus on four areas of human development: health, education, gender equality, and basic freedoms. I address infant mortality in the greatest detail, as it is an ideal indicator of inequality, development, and state effectiveness (Gerring et al., 2012; Ross, 2006). I then turn to two closely related measures: the mortality of children under 5 and overall life expectancy. For education outcomes, I look at literacy and school enrollment, as well as the gender balance in both these variables. Unless noted otherwise, the measures are taken from World Bank (2011).

All of these variables are directly affected by public policies and indicate responsive governance and general social welfare. Furthermore, they are well-represented in existing work on democracy, facilitating comparisons with this established literature. I focus on outcomes rather than spending for two reasons. First, public spending measures are often unreliable in autocracies. What goes on the books as social spending may in reality be diverted to

patronage. Second, regimes vary greatly in their capacity to translate spending into outcomes, which are of course what we ultimately care about.

I also test four measures of political rights, two concerning civil liberties, one women's political rights, and the last an indicator of physical repression by the state. Besides their normative importance, political freedoms are critical to human development and economic productivity. Furthermore, the results on civil liberties can be compared against Gandhi (2008b) and Conrad (2011). Summary statistics are shown in Online Appendix Table A1.

Definitions of Regime Types

Democracy is measured using Boix et al.'s (2013) dichotomous coding, which requires competitive elections and a minimal level of suffrage. Although highly correlated with other measures of democracy, this coding is advantageous in that it explicitly differentiates democracies from EA regimes based on the freedom and fairness of elections.

EA regimes are defined as autocracies in which multiple political parties exist and legally compete in legislative elections (from Cheibub et al., 2010). Thus, they tolerate organized opposition and provide citizens a regular, legal route to pressure the government. About 90% of these regimes experienced a full legislative election within the previous 5 years (using Hyde & Marinov, 2012).[20] This definition has the advantage of concreteness, as it is based on a formal legal requirement. In contrast, concepts like competitiveness are worth testing, but are more subjective and will suffer from reverse causation if development outcomes influence electoral behavior.

Empirical Setup

I test four distinct panel models for each outcome variable *Y*. As a baseline, I first run ordinary least squares (OLS) with dummy variables for EA and democracy (lagged by 1 year):

$$Y_{it+1} = \alpha_0 + \alpha_1 EA_{it} + \alpha_2 D_{it} + \alpha_3 R(Y_{it+1}) + \alpha_4 \mathbf{X_{it}} + \gamma_t + \varepsilon_{it+1}, \tag{1}$$

where EA_{it} and D_{it} are indicators of EA and democracy for country i in year t. Closed autocracy is the omitted category. $R(\cdot)$ stands for the regional average (excluding the country i), $\mathbf{X_{it}}$ is a set of control variables, the γ_t are year fixed effects, and ε is an error term.

Although useful, this approach cannot demonstrate the causal effect of regime type. The second model thus instruments for EA using four measures of external regime types and two of institutional inheritance. Democracy is

assumed to be exogenous, but violations of this should not affect inference on EA. The first-stage equation is thus the following:

$$
\begin{aligned}
EA_{it} = {} & \beta_0 + \beta_1 R(EA_{it}) + \beta_2 R(D_{it}) + \beta_3 N(EA_{it}) + \beta_4 N(D_{it}) \\
& + \beta_5 R(Y_{it+1}) + \beta_6 EA(PreviousLeader) \\
& + \beta_7 EA(PreviousRegime) + \boldsymbol{\beta_8 X_{it}} + \gamma_t + \mu_{it},
\end{aligned} \tag{2}
$$

where $N(\cdot)$ stands for the neighbor average and μ is an error term. The IV models are calculated using the ivreg2 command in Stata (C. F. Baum, Schaffer, & Stillman, 2010). I use the LIML form of the IV, which has attractive robustness properties (Stock & Yogo, 2005). I also check the results using 2SLS and the generalized method of moments (GMM)IV estimator.

The third and fourth models test the cumulative, historical effects of regime types, mirroring the approach in Gerring et al. (2012). For each country, I calculate the weighted average of each regime type back to 1946. As in Gerring et al., I apply a 1% annual depreciation to the weight. In contrast, I normalize the weighted history to the same scale as an average, so that the three measures sum to 1. For instance, *EA History* is measured as,

$$
EAHistory_{it} = \frac{\displaystyle\sum_{\tau \geq 0} 0.99^{\tau} EA_{i,t-\tau}}{\displaystyle\sum_{\tau \geq 0} 0.99^{\tau}}, \tag{3}
$$

and similarly for *Democracy History*. This approach captures long-term experience, but unlike a stock variable, avoids conflating it with the time period and years of independence. The third model type replaces the regime dummies in equation (1) with the history measures. The fourth, which I consider the benchmark model, instruments for *EA History* using weighted histories of the instruments.

In the main results, the sample is limited to 158 countries from 1960 to 2007, although this varies by dependent variable. The main models use robust standard errors clustered by country. As a robustness check, I use Driscoll-Kraay standard errors, which account for multiple lags of serial correlation and contemporaneous correlation across units.

Control Variables

For each outcome *Y*, the models control for the regional average of *Y* (excluding the country itself) in the same year. This accounts for distinct regional characteristics, as well as shocks specific to time and region, such as the diffusion of medical innovations.

The models include a common set of further control variables, which are lagged by 1 year. First, I account for *Foreign Aid* (official development assistance as a percentage of gross national income, from World Bank, 2011). While obviously influencing outcomes like infant mortality, aid is often tied to political reform and so represents a potential confounder.

Second, I control for five economic variables: logged *Gross Domestic Product (GDP) per capita* (in real 2000 dollars, from Haber & Menaldo, 2011; World Bank, 2011), *Economic Growth* (the percentage change in *GDP/capita*), *Resource Dependence* (fuel and metal revenues as a percentage of GDP, from Haber & Menaldo, 2011), *Economic Inequality* (Gini, from Galbraith & Kum, 2003; United Nations University–World Institute for Development Economic Research, 2005; World Bank, 2011), and a *Communist* dummy. Government resources and the level and distribution of income strongly condition human development. Haggard and Kaufman (2008) show that Communist regimes have highly distinct policy platforms.[21]

Third, I control for several socioeconomic characteristics that affect the ease of delivering public services: *Population* (logged, from Heston, Summers, & Aten, 2011), *Urbanization* (the percentage living in cities of 100,000+, from Correlates of War Project, 2010), and *Ethnolinguistic Fractionalization* (*ELF*, from Roeder, 2001). Fourth, because domestic conflict can disrupt government services and impede human development, I control for *Political Violence* (a 0-10 rating of domestic civil and ethnic violence, from Marshall, 2010).

Finally, to account for variation across time, I include year fixed effects. I do not include country fixed effects, which problematically negate the influence of the 57 countries that do not vary by regime type. Whereas the purpose of country fixed effects is to account for country-level omitted variables, I rely here on instruments and regime history to obtain causal estimates. However, the online appendix shows that the infant mortality results are robust to including fixed or random effects (Online Appendix Table A5). In other checks, I control for region fixed effects and the Geddes autocracy categories (military, party-based, and personalist).

Empirical Results

I now present the main results, with full regressions shown for infant mortality and the key findings shown for the remaining outcomes. I then discuss several robustness checks for infant mortality and literacy, and finally compare the effect of EA with legislatures and parties for several outcomes.

Main Results

Infant mortality. Table 1 displays results predicting *Infant Mortality* (per 1,000 live births). Models 1 and 2 test *EA* and *Democracy*, while Models 3 and 4 test their historical averages. Models 2 and 4 instrument for *EA* and *EA History*, respectively.[22] Again, Model 4 is the benchmark model. All four models show superior outcomes under both EA and democracy, with all eight coefficients significantly negative for infant mortality. The results are particularly strong in the IV models, implying a large causal effect of EA on health. According to Model 4, a long-term EA regime has about 27 fewer infant deaths per 1000 live births compared with closed autocracy. This is equivalent to the estimated effect of shifting from Vietnam to Sweden on average income. For democracy, the effect is nearly identical.

The table also displays the two primary checks for the validity of the instruments. The weak identification test addresses whether the instruments explain a sufficient amount of variance in the endogenous variable (*EA* or *EA History*). The specific test shown is the Kleibergen–Paap F statistic (measured against the Stock–Yogo critical values), where the common rule of thumb is a threshold of 10 to be considered valid. In both models, the instruments exceed this threshold. The overidentification test (the Hansen J statistic) calculates whether the instruments are correlated with the error term in the outcome equation, violating the exclusion restrictions. A rejection of the null questions the validity of the instruments, but the test is insignificant in both models. The two checks are virtually identical for the other dependent variables because the only variation in the first stage is the regional DV average.

Results for the control variables are largely expected. Higher income is strongly negative for infant mortality, whereas a higher regional average is positive. Consistent with Haggard and Kaufman (2008), Communist regimes feature fewer infant deaths. More populated and less urbanized countries have higher rates, reflecting a difficulty in delivering public health services. Surprisingly, no relationship with inequality or resource dependence is evident.

Other health outcomes. Table 2 summarizes results for two other health outcomes and four education outcomes. The four model types are identical to those in Table 1, but results for the controls are omitted. Each pair of coefficients (for *EA* and *Democracy*) represents a separate regression. A total of 24 are shown in Table 2. Again, the third and fourth models test *EA History* and *Democracy History*.

Table 1. IV and OLS Regressions Predicting Infant Mortality.

DV = Infant mortality	OLS (1)	IV (2)	OLS (3)	IV (4)
EA	−7.319*	−18.253*		
	(−2.15)	(−2.07)		
Democracy	−13.089***	−18.561**		
	(−3.62)	(−3.19)		
EA history			−13.982*	−26.612**
			(−2.57)	(−2.77)
Democracy history			−20.902**	−26.835***
			(−3.23)	(−3.55)
Infant mortality	0.418***	0.425***	0.412***	0.425***
(Regional average)	(4.93)	(4.81)	(4.91)	(4.82)
Foreign aid	0.387**	0.371*	0.290*	0.233†
	(2.76)	(2.48)	(2.38)	(1.86)
GDP/capita (ln)	−15.132***	−15.175***	−13.776***	−13.346***
	(−7.29)	(−7.08)	(−6.68)	(−5.87)
Economic growth	−0.141*	−0.114†	−0.125†	−0.099
	(−2.00)	(−1.67)	(−1.77)	(−1.50)
Economic inequality	0.125	0.087	0.117	0.112
	(0.93)	(0.63)	(0.86)	(0.77)
Resource dependence	0.161	0.133	0.116	0.081
	(1.30)	(1.03)	(0.88)	(0.77)
Communist	−14.991***	−12.805***	−17.037***	−15.079**
	(−4.14)	(−3.62)	(−3.96)	(−3.16)
Urbanization	−0.181*	−0.154†	−0.200*	−0.177*
	(−2.28)	(−1.92)	(−2.58)	(−2.25)
ELF	3.107	3.871	4.857	5.024
	(0.48)	(0.58)	(0.74)	(0.75)
Population (ln)	2.643**	2.480*	2.459**	2.260*
	(2.95)	(2.54)	(2.75)	(2.34)
Political violence	−0.140	−0.120	0.113	0.125
	(−0.19)	(−0.16)	(0.18)	(0.19)
Year dummies?	Y	Y	Y	Y
n	4,435	4,237	4,455	4,257
Countries	151	144	152	145
Adjusted R^2	.798	.790	.805	.798
Weak identification (F)		30.99***		12.95***
Overidentification (χ^2)		10.28		7.50

The table displays models predicting infant mortality from regime type. Model 1 uses OLS to compare EA regimes and democracies with closed autocracies. Model 2 instruments for *EA*. Model 3 uses OLS to test histories of EA and democracy. Model 4 instruments for *EA History*. In each model, both EA and democracy are significantly negative for infant mortality. Years are 1960 to 2007. *t* statistics (based on robust standard errors clustered by country) are shown in parentheses. IV = instrumental variables; OLS = ordinary least squares; DV = dependent variable; EA = electoral authoritarianism; ELF = ethnolinguistic fractionalization.
†$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

Table 2. IV and OLS Regressions for Health and Education Outcomes.

	Regime Level		Regime History	
	OLS	IV	OLS	IV
	(1)	(2)	(3)	(4)
Under-5 Mortality				
EA	−14.03*	−35.82*	−26.52**	−53.51***
	(−2.43)	(−2.51)	(−2.78)	(−3.49)
Democracy	−20.56**	−31.25**	−34.36**	−47.10***
	(−3.34)	(−3.18)	(−3.06)	(−3.50)
Life Expectancy				
EA	1.30†	2.32	2.31*	6.12**
	(1.90)	(1.17)	(2.07)	(3.00)
Democracy	2.80***	3.06*	4.41**	6.18***
	(3.61)	(2.57)	(3.07)	(3.66)
Literacy				
EA	2.51	12.30*	10.12*	24.78**
	(0.99)	(2.09)	(2.47)	(2.62)
Democracy	6.53*	12.02**	15.03**	23.64**
	(2.32)	(2.66)	(3.06)	(2.95)
Schooling				
EA	2.06	9.52	7.76*	20.77**
	(0.97)	(1.60)	(2.10)	(2.76)
Democracy	3.95†	7.94†	8.60*	14.91**
	(1.68)	(1.91)	(2.20)	(2.78)
Literacy Equality				
EA	−0.01	0.22*	0.09*	0.23*
	(−0.23)	(2.37)	(2.28)	(2.29)
Democracy	0.01	0.17*	0.11*	0.20*
	(0.51)	(2.33)	(2.51)	(2.36)
Schooling Equality				
EA	0.04*	0.16**	0.10**	0.18*
	(2.03)	(3.27)	(2.80)	(2.38)
Democracy	0.05*	0.12**	0.10*	0.14*
	(2.34)	(3.09)	(2.57)	(2.34)

The table summarizes models predicting health and education outcomes from regime type. The six dependent variables are listed in the first column. Four models are then shown for each dependent variable. Model 1 uses OLS to compare EA regimes and democracies to closed autocracies. Model 2 instruments for *EA*. Model 3 uses OLS to test histories of EA and democracy. Model 4 instruments for *EA History*. The standard controls are included, but not shown. *t* statistics (based on robust standard errors clustered by country) are shown in parentheses. IV = Instrumental variables; OLS = ordinary least squares; EA = electoral authoritarianism.
†$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

Under-5 Mortality (per 1,000 live births) is a slightly broader measure of basic health compared with infant mortality. *Life Expectancy* (in years) is broader still, but heavily influenced by child mortality. For both variables, EA and democracy are strongly associated with better outcomes (although *EA* misses significance at the .05 level for *Life Expectancy* in Models 1-2). According to Model 4, a long-term EA regime produces 53.5 fewer child deaths per 1,000 births and 6.1 additional years of life compared with closed autocracy. For democracy, the effect is 47 fewer deaths and 6.2 additional years of life.

Education. Table 2 also features four measures of education. The first is *Literacy* (as a percentage of adults, from Banks, 1976; Norris, 2008; World Bank, 2011), which is positively related to democracy and EA in both IV tests. The effects are particularly strong for the historical measures, which is sensible given that literacy needs to build up over time within a population. A similar pattern is found for *Schooling*, the percentage of age-appropriate children enrolled in primary and secondary education (called the gross enrollment ratio). From Model 4, long-term EA regimes increase literacy by 25% and schooling by 21%, each about one standard deviation.

Finally, I test *Literacy Equality* and *Schooling Equality*, respectively the gender ratio of literacy (UNESCO Institute for Statistics, 2012) and *Schooling*. Higher values indicate more equal outcomes across genders. EA and democracy are significantly positive for both using the historical measures and in the IV tests. This makes sense given that the equal vote women receive in modern electoral regimes substantially boosts their political power relative to closed autocracy.

In sum, EA and democracy yield better outcomes for all seven measures of health and education. In particular, both are significant (at the .05 level) in all 14 regime history models, validating the theoretical approach of Gerring et al. (2012). Supporting a causal interpretation, 12 of 14 IV estimates of EA are significant. Furthermore, a sensitivity analysis of the non-IV tests (shown in the online appendix) suggests that omitted variables are unlikely to account for the significant *EA History* findings.[23]

Political rights. The four dependent variables listed in Table 3 measure basic freedoms and political rights. All are scaled to run from 0 to 1, with 1 highest in freedom. *Civil Liberties* is from Freedom House (2010) and *Free Speech* from Cingranelli and Richards (2010). For both, democracies are much freer than closed autocracies, whereas EA regimes lie in between. However, *EA History* is only weakly related in the IV tests. This may be because long-lived

Table 3. IV and OLS Regressions Predicting Political Rights.

	Regime Level		Regime History	
	OLS	IV	OLS	IV
	(1)	(2)	(3)	(4)
Civil Liberties				
EA	0.11***	0.20***	0.13***	0.15*
	(5.33)	(4.00)	(3.64)	(2.33)
Democracy	0.38***	0.43***	0.38***	0.39***
	(15.57)	(12.24)	(10.41)	(8.19)
Free Speech				
EA	0.12***	0.18*	0.10†	0.11
	(3.41)	(2.29)	(1.92)	(1.32)
Democracy	0.36***	0.41***	0.36***	0.35***
	(10.13)	(7.13)	(6.58)	(5.31)
Women's Rights				
EA	0.06**	0.06	0.05	0.14*
	(2.66)	(0.99)	(1.65)	(2.13)
Democracy	0.07**	0.08*	0.11**	0.18***
	(3.10)	(1.98)	(3.06)	(3.55)
Physical Integrity				
EA	0.00	0.03	−0.01	0.03
	(0.07)	(0.48)	(−0.35)	(0.45)
Democracy	0.11***	0.13**	0.11**	0.14**
	(4.54)	(3.01)	(2.89)	(3.15)

The table summarizes models predicting basic freedoms and women's rights from regime type. The four dependent variables are listed in the first column. Four models are then shown for each dependent variable. Model 1 uses OLS to compare EA regimes and democracies to closed autocracies. Model 2 instruments for *EA*. Model 3 uses OLS to test histories of EA and democracy. Model 4 instruments for *EA History*. The standard controls are included, but not shown. *t* statistics (based on robust standard errors clustered by country) are shown in parentheses. IV = Instrumental variables; OLS = ordinary least squares; EA = electoral authoritarianism.
†$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

democracies experience a consolidation process of democratic deepening, whereas EA regimes do not—liberties always remain at the mercy of the ruling party's interests.

The *Women's Rights* variable (Cingranelli & Richards, 2010) relates positively to EA and democracy and, unlike for civil liberties, results are similar in magnitude. Finally, EA is unrelated to *Physical Integrity*, an

index of freedom from torture, killings, and physical repression by the state (Cingranelli & Richards, 2010), whereas democracy is strongly positive in all four tests. This presents an interesting contrast with EA's positive relationship with civil liberties. A possible reason is that EA regimes feature a high degree of contention relative to closed autocracies. Thus, their legal recognition of civil liberties may be balanced by their needs to suppress opposition activity (Vreeland, 2008). In comparison, closed regimes facing quiescent populations do not need to resort to widespread physical repression.

Robustness Checks

Table 4 summarizes eight sets of robustness checks for the IV results on infant mortality and literacy, with the baseline results included for comparison. The table shows the IV estimates for *EA* (Models 1 and 3) and *EA History* (Models 2 and 4). Each coefficient represents a separate regression. As clearly seen, the regime history results are highly robust, remaining significant at the .05 level in all 16 models. For regime level, results remain significant in 11 of 16 models, narrowly missing in another 3.

The first check includes two alterations taking into account possible spatial dynamics. First, I control for the neighbor average of the outcome in addition to the regional average. Second, I use Driscoll-Kraay standard errors, which are robust to three lags of serial correlation and arbitrary correlations across countries. *EA*'s significance increases in all four tests.

The second check controls for the autocracy categories coded in Geddes et al. (2014). For Models 1 and 3, I add dummies for military and party-based regimes, with personalist dictatorships and monarchies as the base category. For Models 2 and 4, I instead test their historical averages. The Geddes categories are unrelated to both outcomes (see Online Appendix Table A7).

In the next two checks, I replace the LIML IV estimator with 2SLS and a GMM estimator, with little effect on the findings. The fifth check adds region dummies. In the sixth check, I limit the sample to autocracies. The level models necessarily omit *Democracy*, but the history models still include *Democracy History*. In the seventh check, I remove cases of state failure (from Marshall & Jaggers, 2010) because these are over-represented among closed autocracies. In the final check, I remove *Economic Inequality* and *Foreign Aid* as controls, as they have the most missing data. To compare with Table 1, Model 2's sample size increases to 5,645 (with 150 countries). For the literacy models, the sample is expanded to 1946-2007. The IV estimates for *EA* become slightly stronger.

Table 4. IV Robustness Checks for Infant Mortality and Literacy.

	Infant Mortality		Literacy	
	Level	History	Level	History
	(1)	(2)	(3)	(4)
Baseline	−18.25*	−26.61**	12.30*	24.78**
	(−2.07)	(−2.77)	(2.09)	(2.62)
Spatial dynamics	−11.89***	−20.96***	5.17**	13.58***
	(−4.50)	(−11.12)	(2.78)	(4.95)
Geddes types added	−18.20†	−27.76**	13.83*	29.12*
	(−1.83)	(−2.60)	(2.08)	(2.47)
2SLS	−15.83*	−24.53**	9.02*	18.22**
	(−2.18)	(−2.86)	(2.15)	(2.96)
GMM-IV	−16.12*	−22.32**	5.00	11.52*
	(−2.22)	(−2.71)	(1.35)	(1.97)
Region FE	−16.79*	−21.14*	7.23	18.13*
	(−2.00)	(−2.03)	(1.00)	(1.98)
Autocracies only	−17.35†	−33.36**	13.37†	42.59**
	(−1.91)	(−3.07)	(1.77)	(3.04)
No state failure	−18.44*	−26.02**	11.82*	24.21**
	(−2.06)	(−2.72)	(1.99)	(2.58)
Inequality/aid omitted	−22.64**	−33.66***	17.86**	29.73***
	(−2.93)	(−4.05)	(3.16)	(4.55)

The table summarizes several robustness checks for the IV models predicting infant mortality and literacy. Only the results for *EA* and *EA History* are shown. The first column lists the model checks, which are described in the text. Models 1 and 3 instrument for *EA* and test the effect of regime level. Models 2 and 4 instrument for *EA History* and test the effect of regime experience. *t* statistics (based on robust standard errors clustered by country) are shown in parentheses. IV = instrumental variables; EA = electoral authoritarianism; 2SLS = two-stage least squares; GMM = generalized method of moments; FE = fixed effects.
†$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

Other Autocratic Institutions

How does EA compare with other institutions that have become widespread in autocracies? Studies of autocracy have focused the greatest attention on legislatures and parties, but there is a shortfall of work explicitly comparing these different institutions.[24] I therefore compare EA with legislatures and parties (measured from Cheibub et al., 2010) in the absence of multiparty competition. Because *EA* incorporates all three elements, it is not yet clear which is really doing the work. As a robustness check, I also test the effect of

a *Multiparty Legislature*, which differs from *EA* in additionally requiring that multiple parties are seated in the legislature. About 80% of EA regimes satisfy this requirement.[25] I expect the two measures of multiparty contestation to have similar effects.

To make the comparisons, I adapt the third model type, namely, a non-IV test of regime type histories. Ideally, an IV setup would be used, but I lack a reliable set of instruments for legislatures and parties.[26] For each outcome variable, I run four separate regressions, testing historical averages of the four alternative institutions. Each regression includes the standard controls and *Democracy History*.

Figure 2 graphically displays the estimated coefficients (with 95% confidence intervals) predicting *Infant Mortality, Literacy, Literacy Equality*, and *Civil Liberties*. As discussed, *EA History* produces superior outcomes for all four measures. Results are virtually identical for *Multiparty Legislature*. However, the effects of legislatures and parties by themselves are opposite in direction for all four outcomes, albeit inconsistently significant. Thus, legislatures and parties without multiparty competition are associated with higher infant mortality and lower civil liberties.

This result conflicts with theories, such as Gandhi's (2008b), that legislatures in isolation can induce political concessions. Rather, legislatures and parties by themselves may only serve to increase regime power by co-opting elites who would otherwise pressure the government. Multiparty elections, in contrast, motivate regimes to promote citizen welfare. This calls into question many of the empirical findings on legislatures and parties, which may be driven by the large share of regimes with these institutions that additionally feature multiparty competition.

Conclusion

Autocratic elections matter. Relative to closed autocracy, EA regimes perform better on health, education, gender equality, and civil liberties. Furthermore, the IV models identify these effects as causal and the regime history models find a particularly strong cumulative effect of EA on health and education. In contrast, legislatures and parties in the absence of multiparty competition display slightly negative outcomes. This points to the acceptance of multiparty elections as the most politically significant feature of autocracy.

The results have a number of important implications. First, the findings contribute to the political economy of development literature. A continuing theme in this field is the importance of institutions but without a clear picture of which institutions matter. Greater attention should be given to autocratic electoral institutions, especially their role in generating accountability and
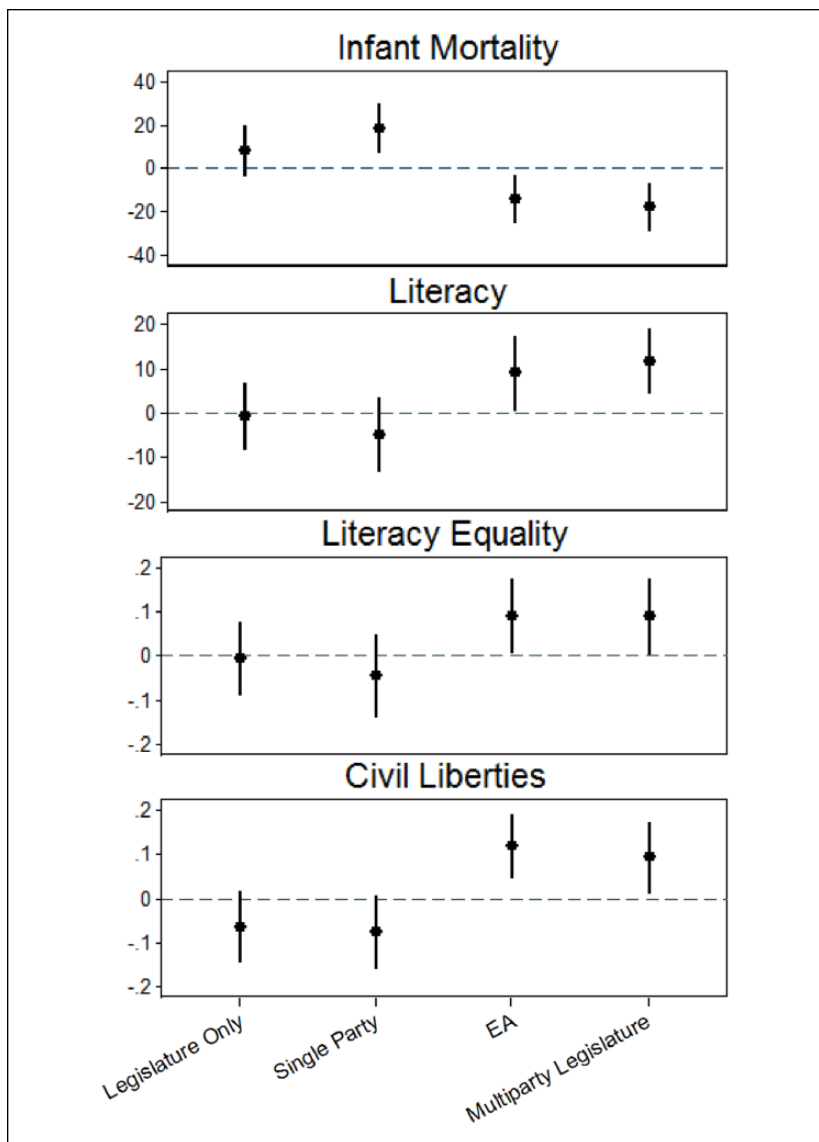
Figure 2. Effects of autocratic institutions on human development.
The figure compares the effect of electoral authoritarianism (EA) with other autocratic institutions. The dots are regression coefficients (shown with 95% confidence intervals) estimating the long-term effects of different institutions on four development outcomes. EA and legislatures with multiparty representation lead to better outcomes for all four measures. Legislatures and parties in the absence of multiparty elections yield negative effects.

promoting specific political models of development. For instance, the general pattern found for EA closely corresponds to the East Asian developmental model associated with Taiwan, Singapore, and South Korea. Like EA regimes generally, the "Asian Tigers" featured large public investments in education and health, middle levels of civil liberties, and low redistribution (Haggard & Kaufman, 2008).[27] As the Asian Tigers were EA regimes during their key periods of development, this may suggest a natural affinity between EA and this particular economic model.

Second, several scholars have questioned the welfare effects of democracy promotion given that it often stalls at EA (Goldsmith, 2008; Lust-Okar, 2006; Regan & Bell, 2010). In contrast, this article implies that the international encouragement of elections is a net positive for citizen welfare, even when the end result is short of democracy. Unexpectedly, EA regimes perform as well as democracy in the IV tests for health and education. On balance, however, the results still support democracy as the most advantageous system, as it maintains a clear superiority on civil liberties and physical repression. In fact, *the results demonstrate a lack of tension between political freedom and government performance.* Thus, the encouragement of contested elections should continue with added vigor, favoring democracy as the ultimate goal but still recognizing EA as clearly superior to closed autocracy.

Finally, the results provide further evidence that scholars should move beyond the democracy-autocracy dichotomy when predicting political outcomes. Lumping autocracies together as one large group overlook a great deal of variation due to autocratic institutions. In particular, future work can extend this article's IV strategy for EA to other outcomes, such as economic growth and conflict behavior. It is critical that we further our understanding of how autocratic regimes choose policies and how elections influence these decisions. Given that the majority of the developing world remains under autocracy, continued insight into how autocratic politics can improve human development bears on the welfare of a large part of the world's population.

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Notes

1. For more thorough overviews of this literature, see Haggard and Kaufman (2008), Carbone (2009), and Halperin, Siegle, and Weinstein (2010).
2. In empirical testing, Gandhi (2008b) uses a three-valued measure where 0 = *no legislature*, 1 = *a single-party legislature*, and 2 = *a multiparty legislature*. However, her theory focuses on the existence of a legislature.
3. Scholars have also related autocratic institutions to democratization (Brownlee, 2009; Geddes, 1999; Wright & Escribà-Folch, 2012), torture (Vreeland, 2008), terrorism (Aksoy, Carter, & Wright, 2012), civil war onset (Regan & Bell, 2010), and conflict behavior (Kinne & Marinov, 2013; Lai & Slater, 2006; Weeks, 2008).
4. Several studies analyze countries at middle values of the Polity democracy score, often called anocracies (Blaydes & Kayser, 2011; Regan & Bell, 2010), but this lumps together highly disparate regimes. For instance, only 42% of the anocracies in Blaydes and Kayser (2011) are EA regimes. Bueno de Mesquita, Smith, Siverson, and Morrow's (2003) selectorate theory argues that larger winning coalitions predict public goods provision. However, it's unclear whether an EA regime's winning coalition is large (the electoral majority) or small (the party's inner circle).
5. Of course, this partly reflects the smaller margins of party control within democracies. The data are taken from Keefer (2010) and cover 1975-2010.
6. The same logic that Bueno de Mesquita et al. (2003) use to connect democracies to public goods—their cost efficiency relative to individual payoffs for large electorates—also applies to EA regimes.
7. For instance, Blaydes (2011) finds that opposition-supporting areas in Mubarak's Egypt were less likely to receive connections to public sewer and water lines.
8. Reversing the democratic pattern, the poor are often more likely to vote in autocratic elections and support the ruling party (Blaydes, 2011; Magaloni, 2006).
9. The accountability of EA regimes should not be overestimated, either. These regimes routinely violate norms of free and fair competition and use state resources and coercion to retain power. However, the same violations are only multiplied in closed autocracies.
10. This was in conjunction with an increased emphasis on primary education and a general reorientation of spending toward average citizens (Kosack, 2014).
11. Wigley and Akkoyunlu-Wigley (2011) also argue that rights protections promote health outcomes directly (i.e., not through policy) by increasing autonomy, self-esteem, and social capital. Also see Chandra and Rudra (2015) on public deliberation in autocracies.
12. Kim and Gandhi (2010), for instance, use seven instruments for an autocratic legislature: dummies for military and civilian dictatorship, resource exports, size of

the manufacturing workforce, counts of leader changes and purges, and the global share of democracies. They then use the instrumented likelihood of a legislature to predict workers' wages and strike activity. However, resource wealth and the size of the manufacturing workforce could clearly affect wages directly. Military dictatorship and political instability also directly influence policies. The world's share of democracies most plausibly satisfies an exclusion restriction, but may simply be picking up the effect of time (which is omitted from the outcome equation).

13. Tests were also run using trade partners' regime types (weighted by dyadic trade, from Barbieri & Keshk, 2012), but these were not found to be consistently related to a country's regime type. Neighbors are countries that share a land border or are separated by no more than 24 miles of water (Correlates of War Project, 2007).

14. Data on leader changes come from Goemans, Gleditsch, and Chiozza (2009). The previous regime is defined as that existing before the most recent regime breakdown in the Geddes, Wright, and Frantz (2014) data.

15. Regional regime types also predict *transitions* to EA (Miller, 2014).

16. One possibility is that autocracies feel increased popular pressure from neighboring regime types and respond with policy concessions, possibly as an *alternative* to liberalizing (Desai, Olofsgård, & Yousef, 2008). If so, then we should find a direct effect of local regime types within the set of countries that remain closed autocracies. However, none of the four diffusion variables are predictive of infant mortality in this sample, either in combination or singly (see Online Appendix Table A3).

17. Past institutions could affect past outcome values, which then influence current values, but because this assumes that the causal link is present, it does not directly question the findings.

18. A related check is to test whether the instruments predict the outcome after controlling for the endogenous variable. If not, this suggests the exclusion restrictions hold. The instruments are indeed non-predictive: For the infant mortality tests, none of the six instruments are significant when tested individually, nor are they jointly significant (using an *F*-test).

19. See Online Appendix Table A4. All 40 total tests are of consistent sign. As should be expected, the weakest results come after dropping the most predictive instruments, the neighbor variables.

20. Recoding the remaining 10% as closed autocracies leaves the results unchanged.

21. Results are unchanged after also adding a post-Communist dummy.

22. The first stages from the IV models are shown in Online Appendix Table A2.

23. Following Altonji, Elder, and Taber (2005), this analysis calculates how strongly omitted variables would need to predict EA to explain the findings, then compares this to how strongly *observed* variables predict EA. Generally, a ratio of 1 or more implies that the relationship is unlikely to be due to omitted variables. For *EA History*, six of the seven tests for health and education are above 1, with the sole exception at 0.91.

24. An exception is work on democratization (Brownlee, 2009; Wright & Escribà-Folch, 2012).

25. In the remaining 20%, either the ruling party wins every seat (e.g., Singapore 1968-1983) or the regime is in a period between legalizing competition and seating the election winners.
26. I investigated using regional and neighbor averages of these variables, but the resulting instruments were too weak to be considered valid.
27. As shown in Online Appendix Table A8, EA regimes are indistinguishable from closed autocracies on income redistribution. In addition, this article's results hold when the Tigers are removed from the sample (Online Appendix Table A7). Thus, the similarities are not being driven by the Tigers themselves.

Supplemental Material

The online appendix is available at http://cps.sagepub.com/supplemental

References

Acemoglu, D., Naidu, S., Restrepo, P., & Robinson, J. A. (2014). *Democracy does cause growth* (NBER Working Paper No. 20004). Cambridge, MA: National Bureau of Economic Research.

Adserà, A., Boix, C., & Payne, M. (2003). Are you being served? Political accountability and quality of government. *Journal of Law, Economics, & Organization*, *19*, 445-490.

Aksoy, D., Carter, D. B., & Wright, J. (2012). Terrorism in dictatorships. *Journal of Politics*, *74*, 810-826.

Altonji, J. G., Elder, T. E., & Taber, C. R. (2005). Selection on observed and unobserved variables: Assessing the effectiveness of Catholic schools. *Journal of Political Economy*, *113*, 151-184.

Ambrosio, T. (2010). Constructing a framework of authoritarian diffusion: Concepts, dynamics, and future research. *International Studies Perspectives*, *11*, 375-392.

Banks, A. S. (1976). *Cross-National Time Series, 1815−1973*. Ann Arbor, MI: Inter-University Consortium for Political and Social Research.

Barbieri, K., & Keshk, O. (2012). *Correlates of war project trade* [Data set codebook, Version 3.0]. Available from www.correlatesofwar.org

Baum, C. F., Schaffer, M. E., & Stillman, S. (2010). ivreg2: Stata module for extended instrumental variables/2SLS, GMM and AC/HAC, LIML and k-class regression.

Baum, M., & Lake, D. (2003). The political economy of growth: Democracy and human capital. *American Journal of Political Science*, *47*, 333-347.

Beer, C. (2009). Democracy and gender equality. *Studies in Comparative International Development*, *44*, 212-227.

Besley, T., & Kudamatsu, M. (2006). Health and democracy. *American Economic Review*, *96*, 313-318.

Blaydes, L. (2011). *Elections and distributive politics in Mubarak's Egypt*. Cambridge, UK: Cambridge University Press.

Blaydes, L., & Kayser, M. A. (2011). Counting calories: Democracy and distribution in the developing world. *International Studies Quarterly*, *55*, 887-908.

Boix, C., Miller, M. K., & Rosato, S. (2013). A complete data set of political regimes, 1800−2007. *Comparative Political Studies*, *46*, 1523-1554.

Brandt, L., & Turner, M. (2007). The usefulness of imperfect elections: The case of village elections in rural China. *Economics & Politics*, *19*, 453-480.

Bratton, M., & van de Walle, N. (1997). *Democratic experiments in Africa: Regime transitions in comparative perspective*. Cambridge, UK: Cambridge University Press.

Brown, D. S. (1999). Reading, writing, and regime type: Democracy's impact on primary school enrollment. *Political Research Quarterly*, *52*, 681-707.

Brown, D. S. (2004). Democracy and gender inequality in education: A cross-national examination. *British Journal of Political Science*, *34*, 137-152.

Brown, D. S., & Hunter, W. (2004). Democracy and human capital formation: Education spending in Latin America, 1980 to 1997. *Comparative Political Studies*, *37*, 842-864.

Brownlee, J. (2007). *Authoritarianism in an age of democratization*. Cambridge, UK: Cambridge University Press.

Brownlee, J. (2009). Portents of pluralism: How hybrid regimes affect democratic transitions. *American Journal of Political Science*, *53*, 515-532.

Bueno de Mesquita, B., Smith, A., Siverson, R., & Morrow, J. (2003). *The logic of political survival*. Cambridge, MA: MIT Press.

Carbone, G. M. (2009). The consequences of democratization. *Journal of Democracy*, *20*, 123-137.

Carothers, T. (1999). *Aiding democracy abroad: The learning curve*. Washington, D.C: Carnegie Endowment for International Peace.

Chandra, S., & Rudra, N. (2015). Reassessing the links between regime type and economic performance: Why some authoritarian regimes show stable growth and others do not. *British Journal of Political Science*, *45*, 253-285.

Charron, N., & Lapuente, V. (2011). Which dictators produce quality of government? *Studies in Comparative International Development*, *46*, 397-423.

Chauvet, L., & Collier, P. (2009). Elections and economic policy in developing countries. *Economic Policy*, *24*, 509-550.

Cheibub, J. A., Gandhi, J., & Vreeland, J. R. (2010). Democracy and dictatorship revisited. *Public Choice*, *143*, 67-101.

Chiang, T. (1997). Taiwan's 1995 health care reform. *Health Policy*, *39*, 225-239.

Cingranelli, D. L., & Richards, D. L. (2010). *The Cingranelli-Richards (CIRI) human rights dataset* (version 2011.12.09). Available from www.humanrightsdata.org

Cleary, M. R. (2007). Electoral competition, participation, and government responsiveness in Mexico. *American Journal of Political Science*, *51*, 283-299.

Conrad, C. R. (2011). Constrained concessions: Beneficent dictatorial responses to the domestic political opposition. *International Studies Quarterly*, *55*, 1167-1187.

Correlates of War Project. (2007). *Direct contiguity data, 1816−2006* (version 3.1). Available from www.correlatesofwar.org

Correlates of War Project. (2010). *National material capabilities dataset* (version 4.0). Available from www.correlatesofwar.org

Coulon, C. (1988). Senegal: The development and fragility of semidemocracy. In L. Diamond, J. J. Linz, & S. M. Lipset (Eds.), *Democracy in developing countries: Africa* (pp. 141-178). Boulder, CO: Lynne Rienner.

Desai, R. M., Olofsgård, A., & Yousef, T. M. (2008). The logic of authoritarian bargains. *Economics & Politics*, *21*, 93-125.

Englund, W. (2011, June 23). In Russia, a new voice for patients. *Washington Post*. Retrieved from www.washingtonpost.com/world/in-russia-a-new-voice-for-patients/2011/06/20/AGRxCGhH_story.html

Falleti, T. G. (2009). Infiltrating the state: The evolution of health care reforms in Brazil, 1964−1988. In J. Mahoney & K. Thelen (Eds.), *Explaining institutional change: Ambiguity, agency, and power* (pp. 38-62). Cambridge, UK: Cambridge University Press.

Fearon, J. D. (2011). Self-enforcing democracy. *Quarterly Journal of Economics*, *126*, 1661-1708.

Freedom House. (2010). *Freedom in the world 2010: The annual survey of political rights and civil liberties*. Lanham, MD: Rowman & Littlefield.

Galbraith, J. K., & Kum, H. (2003). Inequality and economic growth: A global view based on measures of pay. *CESifo Economic Studies*, *49*, 527-556.

Gandhi, J. (2008a). Dictatorial institutions and their impact on economic growth. *European Journal of Sociology*, *49*, 3-30.

Gandhi, J. (2008b). *Political institutions under dictatorship*. Cambridge, UK: Cambridge University Press.

Gandhi, J., & Lust-Okar, E. (2009). Elections under authoritarianism. *Annual Review of Political Science*, *12*, 403-422.

Geddes, B. (1999). What do we know about democratization after twenty years? *Annual Review of Political Science*, *2*, 115-144.

Geddes, B., Wright, J., & Frantz, E. (2014). Authoritarian breakdown and regime transitions: A new data set. *Perspectives on Politics*, *12*, 313-331.

Gehlbach, S., & Keefer, P. (2011). Investment without democracy: Ruling-party institutionalization and credible commitment in autocracies. *Journal of Comparative Economics*, *39*, 123-139.

Gerring, J. (2011). Democracy and development: Legacy effects. In N. J. Brown (Ed.), *The dynamics of democratization: Dictatorship, development, and diffusion* (pp. 212-238). Baltimore, MD: Johns Hopkins University Press.

Gerring, J., Thacker, S. C., & Alfaro, R. (2012). Democracy and human development. *Journal of Politics*, *74*, 1-17.

Gleditsch, K. S., & Ward, M. D. (2006). Diffusion and the international context of democratization. *International Organization*, *60*, 911-933.

Goemans, H. E., Gleditsch, K. S., & Chiozza, G. (2009). Archigos: A data set on leaders, 1875−2004, version 2.9. University of Rochester. Retrieved from www.rochester.edu/college/faculty/hgoemans/data.htm

Goldsmith, A. A. (2008). Making the world safe for partial democracy? Questioning the premises of democracy promotion. *International Security*, *33*, 120-147.

Haber, S., & Menaldo, V. (2011). Do natural resources fuel authoritarianism? A reappraisal of the resource curse. *American Political Science Review*, *105*, 1-26.

Haggard, S., & Kaufman, R. R. (2008). *Development, democracy, and welfare states: Latin America, East Asia, and Eastern Europe*. Princeton, NJ: Princeton University Press.

Halperin, M. H., Siegle, J. T., & Weinstein, M. M. (2010). *The democracy advantage: How democracies promote prosperity and peace* (Rev ed.). New York, NY: Routledge.

Hankla, C. R., & Kuthy, D. (2013). Economic liberalism in illiberal regimes: Authoritarian variation and the political economy of trade. *International Studies Quarterly*, *57*, 492-504.

Heston, A., Summers, R., & Aten, B. (2011). *Penn world table, version 7.0*. Retrieved from pwt.econ.upenn.edu

Hicken, A. (2011). Clientelism. *Annual Review of Political Science*, *14*, 289-310.

Hoffman, B., & Robinson, L. (2009). Tanzania's missing opposition. *Journal of Democracy*, *20*, 123-136.

Humphreys, M., & Bates, R. (2005). Political institutions and economic policies: Lessons from Africa. *British Journal of Political Science*, *35*, 403-428.

Husted, T. A., & Kenny, L. W. (1997). The effect of the expansion of the voting franchise on the size of government. *Journal of Political Economy*, *105*, 54-82.

Hyde, S. D., & Marinov, N. (2012). Which elections can be lost? *Political Analysis*, *20*, 191-210.

Jensen, N., Malesky, E. J., & Weymouth, S. (2014). Unbundling the relationship between authoritarian legislatures and political risk. *British Journal of Political Science*, *44*, 655-684.

Kaufman, R. R., & Segura-Ubiergo, A. (2001). Globalization, domestic politics, and social spending in Latin America: A time-series cross-section analysis, 1973−97. *World Politics*, *53*, 553-587.

Keefer, P. (2010). *Database of political institutions: Changes and variable definitions*. Washington, DC: Development Research Group, World Bank.

Kim, W., & Gandhi, J. (2010). Coopting workers under dictatorship. *Journal of Politics*, *72*, 646-658.

Kinne, B. J., & Marinov, N. (2013). Electoral authoritarianism and credible signaling in international crises. *Journal of Conflict Resolution*, *57*, 359-386.

Kitschelt, H. (1986). Political opportunity structures and political protest: Anti-nuclear movements in four democracies. *British Journal of Political Science*, *16*, 57-85.

Kosack, S. (2014). The logic of pro-poor policymaking: Political entrepreneurship and mass education. *British Journal of Political Science*, *44*, 409-444.

Lai, B., & Slater, D. (2006). Institutions of the offensive: Domestic sources of dispute initiation in authoritarian regimes, 1950−1992. *American Journal of Political Science*, *50*, 113-126.

Lake, D., & Baum, M. (2001). The invisible hand of democracy: Political control and the provision of public services. *Comparative Political Studies*, *34*, 587-621.

Levitsky, S., & Way, L. A. (2010). *Competitive authoritarianism: Hybrid regimes after the Cold War*. Cambridge, UK: Cambridge University Press.

Lindert, P. H. (2004). *Growing public: Social spending and economic growth since the eighteenth century*. Cambridge, UK: Cambridge University Press.

Lust-Okar, E. (2006). Elections under authoritarianism: Preliminary lessons from Jordan. *Democratization*, *13*, 456-471.

Magaloni, B. (2006). *Voting for autocracy: Hegemonic party survival and its demise in Mexico*. Cambridge, UK: Cambridge University Press.

Magaloni, B. (2008). Credible power-sharing and the longevity of authoritarian rule. *Comparative Political Studies*, *41*, 715-741.

Mares, I., & Carnes, M. E. (2009). Social policy in developing countries. *Annual Review of Political Science*, *12*, 93-113.

Marshall, M. G. (2010). *Major episodes of political violence (MEPV) and conflict regions, 1946−2008*. Available from www.systemicpeace.org

Marshall, M. G., & Jaggers, K. (2010). Polity IV project: Political regime characteristics and transitions, 1800−2009. Fairfax, VA: Center for Systemic Peace, George Mason University.

Martinez-Bravo, M., Padró i Miquel, G., Qian, N., & Yao, Y. (2012). *The effects of democratization on public goods and redistribution: Evidence from China* (NBER Working Paper No. 18101). Cambridge, MA: National Bureau of Economic Research.

Miller, M. K. (2014). *The origins of electoral authoritarianism and democracy*. Unpublished manuscript. George Washington University.

Miller, M. K. (2015). Elections, information, and policy responsiveness in autocratic regimes. *Comparative Political Studies*, *48*, 691-727.

Mulligan, C. B., Gil, R., & Sala-i-Martin, X. (2004). Do democracies have different public policies than nondemocracies? *Journal of Economic Perspectives*, *18*, 51-74.

Nelson, J. M. (2007). Elections, democracy, and social services. *Studies in Comparative International Development*, *41*, 79-97.

Norris, P. (2008). *Democracy time-series dataset*. Retrieved from www.hks.harvard.edu/fs/pnorris/Data/Data.htm

Olson, M. (1984). *The rise and decline of nations: Economic growth, stagflation, and social rigidities*. New Haven, CT: Yale University Press.

Olson, M. (2000). *Power and prosperity*. New York, NY: Basic Books.

O'Brien, K. J., & Li, L. (2000). Accommodating "democracy" in a one-party state: Introducing village elections in China. *China Quarterly*, *162*, 465-489.

Pearl, J. (2009). Causal inference in statistics: An overview. *Statistics Surveys*, *3*, 96-146.

Pepinsky, T. B. (2014). The institutional turn in comparative authoritarianism. *British Journal of Political Science*, *44*, 631-653.

Regan, P. M., & Bell, S. R. (2010). Changing lanes or stuck in the middle: Why are anocracies more prone to civil wars? *Political Research Quarterly*, *63*, 747-759.

Roeder, P. G. (2001). *Ethnolinguistic fractionalization (ELF) indices, 1961 and 1985*. Retrieved from weber.ucsd.edu/~proeder/elf.htm

Ross, M. (2006). Is democracy good for the poor? *American Journal of Political Science*, *50*, 860-874.

Schedler, A. (Ed.). (2006). *Electoral authoritarianism: The dynamics of unfree competition*. Boulder, CO: Lynne Rienner.

Simmons, B. A., Dobbin, F., & Garrett, G. (2006). Introduction: The international diffusion of liberalism. *International Organization*, *60*, 781-810.

Simpser, A. (2013). *Why governments and parties manipulate elections: Theory, practice and implications*. New York, NY: Cambridge University Press.

Slater, D. (2008). Can Leviathan be democratic? Competitive elections, robust mass politics, and state infrastructural power. *Studies in Comparative International Development*, *43*, 252-272.

Sloan, J., & Tedin, K. L. (1987). The consequences of regime type for public-policy outputs. *Comparative Political Studies*, *20*, 98-124.

Son, A. H. K. (2001). Taiwan's path to national health insurance (1950−1995). *International Journal of Social Welfare*, *10*, 45-53.

Starr, H. (1991). Democratic dominoes: Diffusion approaches to the spread of democracy in the international system. *Journal of Conflict Resolution*, *35*, 356-381.

Stasavage, D. (2005). Democracy and education spending in Africa. *American Journal of Political Science*, *49*, 343-358.

Stock, J. H., & Yogo, M. (2005). Testing for weak instruments in linear IV regression. In D. W. K. Andrews & J. H. Stock (Eds.), *Identification and inference for econometric models: Essays in honor of Thomas J. Rothenberg* (pp. 80-108). New York, NY: Cambridge University Press.

Svolik, M. (2012). *The politics of authoritarian rule*. New York, NY: Cambridge University Press.

UNESCO Institute for Statistics. (2012). Retrieved from stats.uis.unesco.org/unesco

United Nations University–World Institute for Development Economic Research. (2005). *World income inequality database, version 2.0a*. Available from www.wider.unu.edu

Verba, S., Schlozman, K. L., & Brady, H. E. (1995). *Voice and equality: Civic voluntarism in American politics*. Cambridge, MA: Harvard University Press.

Vreeland, J. R. (2008). Political institutions and human rights: Why dictatorships enter into the United Nations convention against torture. *International Organization*, *62*, 65-101.

Wang, S., & Yao, Y. (2007). Grassroots democracy and local governance: Evidence from rural China. *World Development*, *35*, 1635-1649.

Weeks, J. L. (2008). Autocratic audience costs: Regime type and signaling resolve. *International Organization*, *62*, 35-64.

Whitehead, L. (1996). Democratic regions, ostracism, and pariahs. In L. Whitehead (Ed.), *The international dimensions of democratization* (pp. 395-412). Oxford, UK: Oxford University Press.

Wigley, S., & Akkoyunlu-Wigley, A. (2011). The impact of regime type on health: Does redistribution explain everything? *World Politics*, *63*, 647-677.

World Bank. (2011). *World Development Indicators Online (WDI)*. Retrieved from www.worldbank.org/data

Wright, J. (2008). Do authoritarian institutions constrain? How legislatures affect economic growth and investment. *American Journal of Political Science*, *52*, 322-343.

Wright, J., & Escribà-Folch, A. (2012). Authoritarian institutions and regime survival: Transitions to democracy and subsequent autocracy. *British Journal of Political Science*, *42*, 283-309.

Zweifel, T. D., & Navia, P. (2000). Democracy, dictatorship, and infant mortality. *Journal of Democracy*, *11*, 99-114.

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